

FIG. 1

Hand-drawn schematic diagram of a fan speed control circuit, labeled 205. The circuit is divided into two main sections: a control section (206) and a power section (202).

Control Section (206): Receives a "Control signal from Microcontroller". It features an operational amplifier (U2, 741) configured as a voltage follower. The input is connected to the non-inverting input (pin 3) through a 10K resistor (R146). The inverting input (pin 2) is connected to the output (pin 1) through a 1M resistor (R132). The output (pin 1) is connected to the base of a 2N270 MOSFET (Q1) through a 1M resistor (R119). The MOSFET's gate is also connected to the output of the op-amp through a 10F, 50V capacitor (C06). The MOSFET's drain is connected to the fan (FAN) through a 100 OHM resistor (R120). The MOSFET's source is connected to ground through a 1K resistor (R123).

Power Section (202): The MOSFET (Q1) drives the fan. The fan is connected to the drain of the MOSFET. The MOSFET's gate is connected to the output of the op-amp through a 10F, 50V capacitor (C06). The MOSFET's source is connected to ground through a 1K resistor (R123). The MOSFET's drain is connected to the fan through a 100 OHM resistor (R120). The MOSFET's gate is also connected to the output of the op-amp through a 10F, 50V capacitor (C06). The MOSFET's source is connected to ground through a 1K resistor (R123).

Other Components: The circuit includes a 5V supply (V5) and a 12V supply (V12). The output current is labeled "output current TO FAN".

Figure 2

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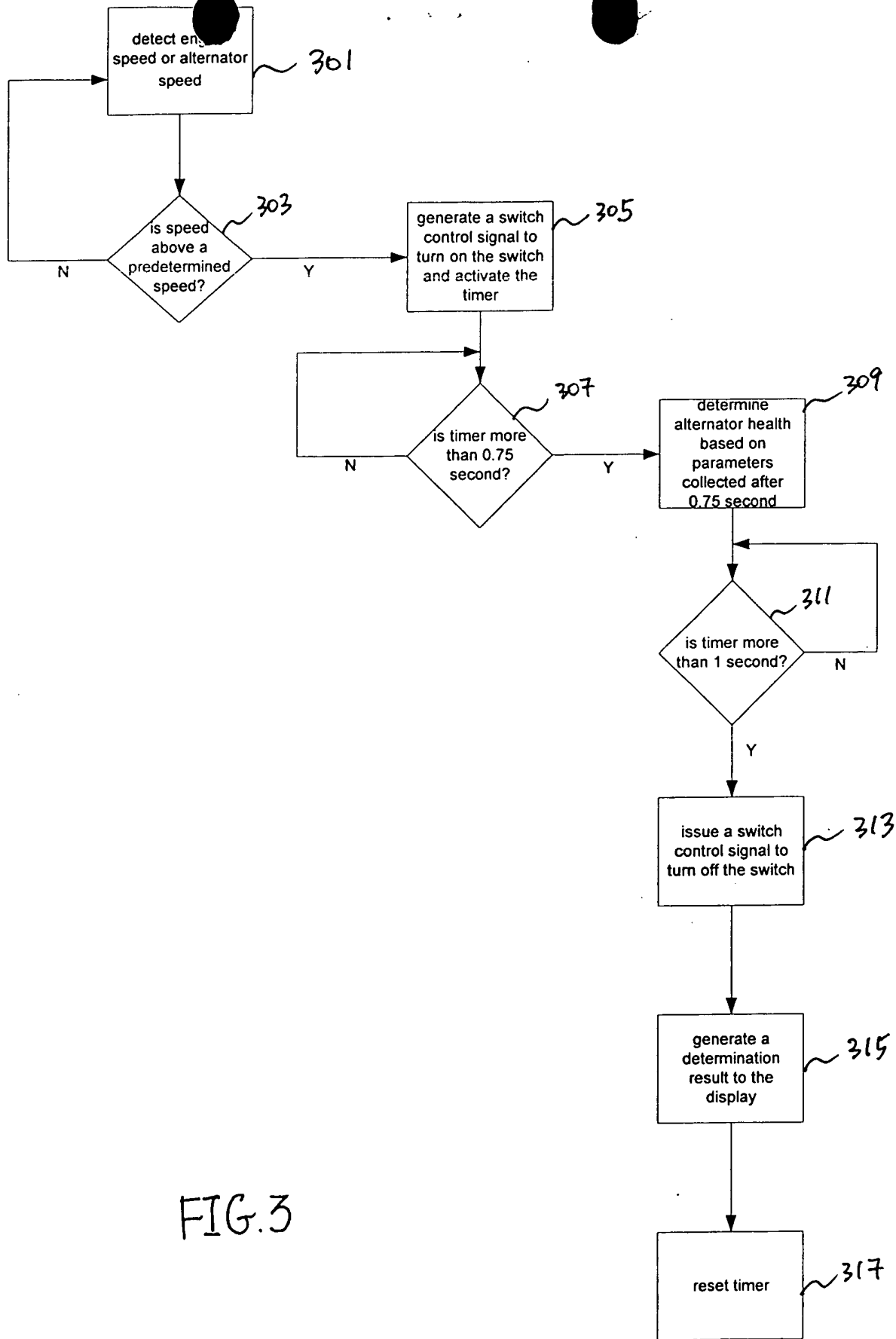


FIG. 3

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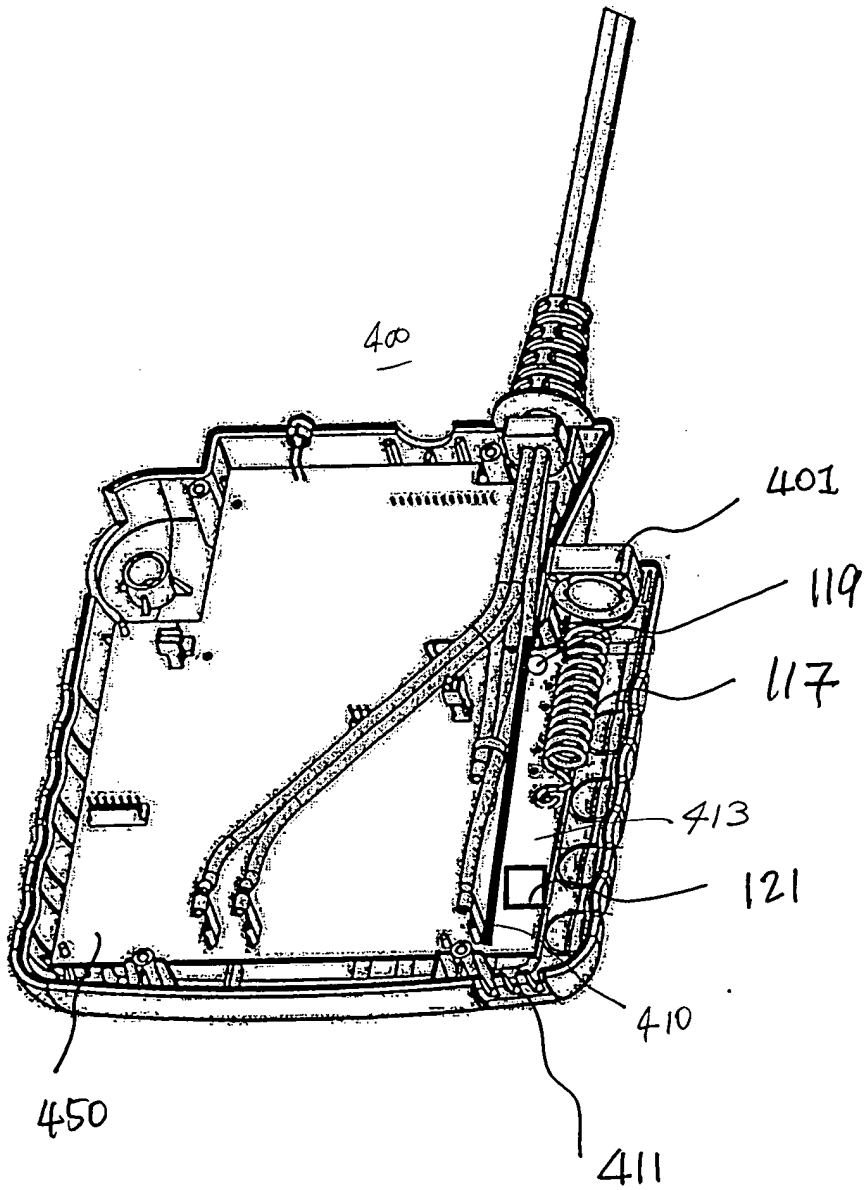


FIG. 4